

What is claimed is:

1. A barrier operator position detector, comprising:
a first rotary member encoded to generate a first five
bit subcode selected from five sequential bits of a 32 bit
code word, the first five bit subcode having the property
that every selected subcode of five sequential bits of the
32 bit code word has a unique value;

5 a second rotary member encoded to generate a second
five bit subcode selected from five sequential bits of a 31
bit code work, the second five bit subcode having the
property that every selected subcode of five sequential bits
of the 31 bit code work has a unique value; and

10 a controller, responsive to the first subcode and the
second subcode, for generating a ten bit multibit subcode,
wherein the ten bit multibit subcode is representative of a
unique position output, the position output being reflective
15 of a position of the barrier in its travel.

2. A barrier operator position detector according to
claim 1, further comprising a clock member for generating a
20 timing signal, wherein the controller, responsive to the
timing signal, samples the first subcode and the second
subcode.

3. A barrier operator position detector according to
claim 2, wherein the clock member comprises a light emitter,
25 a light receiver and a rotary interrupter mechanism disposed
there between for selectively interrupting transmission of
light from the light emitter to the light receiver, wherein
the timing signal is generated upon interruption of the
light transmission.

30 4. A barrier operator position detector according to
claim 2, wherein the first rotary member further comprises
32 geared teeth and wherein the second rotary member further

comprises 31 geared teeth, the gears being adapted for being drivingly connected to a shaft for rotation.

5. A barrier operator position detector, comprising:
 - 5 subcode selected from N sequential bits of a M bit code word, the first N bit subcode having the property that every selected subcode of N sequential bits of the M bit code word has a unique value, where N is greater than 1 and M is greater than N;
 - 10 a second rotary member encoded to generate a second N bit subcode selected from N sequential bits of a M-1 bit code work, the second N bit subcode having the property that every selected subcode of N sequential bits of the M-1 bit code work has a unique value; and
 - 15 a controller, responsive to the first subcode and the second subcode, for generating a 2N bit multibit code, wherein the 2N bit multibit subcode is representative of a unique position output, the position output being reflective of a position of the barrier in its travel.
- 20 6. A barrier operator position detector according to claim 5, further comprising a clock member for generating a timing signal, wherein the controller, responsive to the timing signal, samples the first subcode and the second subcode.
- 25 7. A barrier operator position detector according to claim 6, wherein the clock member comprises a light emitter, a light receiver and a rotary interrupter mechanism disposed there between for selectively interrupting transmission of light from the light emitter to the light receiver, wherein the timing signal is generated upon interruption of the light transmission.
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8. A barrier operator position detector according to claim 6, wherein the first rotary member further comprises M geared teeth and wherein the second rotary member further comprises M-1 geared teeth, the gears being adapted for being drivingly connected to a shaft for rotation.

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9. A movable barrier operator, comprising:
- 10 a motor;
- a transmission connected to the motor to be driven thereby and to the movable barrier to be moved;
- 15 a barrier operator position detector, comprising:
- 15 a first rotary member encoded to generate a first N bit subcode selected from N sequential bits of a M bit code word, the first N bit subcode having the property that every selected subcode of N sequential bits of the M bit code word has a unique value, where N is greater than 1 and M is greater than N; and
- 20 a second rotary member encoded to generate a second N bit subcode selected from N sequential bits of a M-1 bit code work, the second N bit subcode having the property that every selected subcode of N sequential bits of the M-1 bit code work has a unique value; and
- 25 a controller, responsive to the first subcode and the second subcode, for generating a 2N bit multibit code, wherein the 2N bit multibit subcode is representative of a unique position output, the position output being reflective of a position of the barrier in its travel.

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10. A movable barrier operator according to claim 9, wherein the position detector further comprises a clock member for generating a timing signal, wherein the controller, responsive to the timing signal, samples the first subcode and the second subcode.

11. A movable barrier operator according to claim 10,
wherein the clock member comprises a light emitter, a light
receiver and a rotary interrupter mechanism disposed there
between for selectively interrupting transmission of light
5 from the light emitter to the light receiver, wherein the
timing signal is generated upon interruption of the light
transmission.

12. A movable barrier operator according to claim 9,
wherein the first rotary member further comprises M geared
10 teeth and wherein the second rotary member further comprises
M-1 geared teeth, the gears being adapted for being
drivingly connected to a shaft for rotation.

13. A movable barrier operator according to claim 12,
wherein the motor includes an output shaft, the M and M-1
15 geared teeth being drivingly connected to the motor shaft.

14. A movable barrier operator according to claim 13,
further comprising a common pinion driven by the motor shaft
and engaging each gear of the first and second rotary
members.

20 15. A movable barrier operator according to claim 9,
further comprising an input device for commanding movement
of the barrier in one of two directions and wherein the
controller, responsive to the input device, stores direction
of travel of the barrier.

25 16. A barrier operator position detector, comprising:
a first rotary member, responsive to movement of the
barrier, encoded to generate a first N bit subcode selected
from N sequential bits of a M bit code word, the first N bit
subcode having the property that every selected subcode of N

sequential bits of the M bit code word has a unique value, where N is greater than 1 and M is greater than N;

a second rotary member, responsive to movement of the barrier, encoded to generate a second N bit subcode selected from N sequential bits of a M-1 bit code work, the second N bit subcode having the property that every selected subcode of N sequential bits of the M-1 bit code work has a unique value; and

10 a controller, responsive to the first subcode and the second subcode, for generating a 2N bit multibit code, wherein the 2N bit multibit subcode is representative of a unique position output, the position output being reflective of a position of the barrier in its travel.

15 17. The barrier operator position detector of claim
16, wherein the first and second rotary members are
responsive to a shaft rotation of the barrier.

18. The barrier operator position detector of claim
16, further comprising a clock member, responsive to
movement of the barrier, for generating a timing signal,
20 wherein the controller, responsive to the timing signal,
samples the first subcode and the second subcode.